

Mortality

An Overview: 2007

Total South Dakota Resident Deaths	6,800
Crude Death Rates per 100,000 Population	
South Dakota	900.8
United States (Provisional)	800.0
Age-Adjusted Death Rates per 100,000 Population	
South Dakota	780.9
United States	**N/A
Age-Adjusted YPLL Before Age 75 per 100,000 Population	
Whites	5,888
American Indians	19,936

In 2004, the South Dakota Department of Health implemented the new standard death certificate. Multiple races could be indicated on the certificate for the first time. Please see page 229 in the Technical Notes for a more in depth explanation.

In 1999, South Dakota along with the rest of the nation made two significant changes to the way mortality data were analyzed. These changes were the switch to using the 2000 U.S. Standard for age adjusting and using ICD-10 for disease classifications. As a result, comparison to reports prior to 1999 is not possible.

Table 52, below, displays the deaths, crude death rates, and age-adjusted death rates for the United States and South Dakota for the past 20 years.

Table 52
Resident Deaths, Crude Death Rates, and Age-Adjusted Death Rates,
South Dakota and United States, 1988-2007

Year	United States			South Dakota		
	Number	Crude Rate	Age-Adjusted Rate	Number	Crude Rate	Age-Adjusted Rate
2007	*2,415,000	*800.0	**NA	6,800	900.8	780.9
2006	*2,425,900	*810.3	*776.4	7,038	932.4	807.5
2005	2,448,017	825.9	798.8	7,074	937.1	816.2
2004	2,397,615	816.5	800.8	6,811	902.3	783.6
2003	2,448,288	841.9	832.7	7,109	941.8	819.2
2002	2,443,387	847.3	845.3	6,886	912.2	791.0
2001	2,416,425	848.5	854.5	6,915	916.1	796.3
2000	2,403,351	854.0	869.0	7,014	929.2	804.8
1999	2,391,399	857.0	875.6	6,941	997.3	799.1
1998	2,337,256	847.3	870.6	6,850	984.2	791.1
1997	2,314,245	848.8	878.1	6,855	984.9	790.2
1996	2,314,690	859.2	894.1	6,793	976.0	788.1
1995	2,312,132	868.3	909.8	6,901	991.5	798.0
1994	2,278,994	866.1	913.5	6,724	966.1	778.5
1993	2,268,000	872.8	926.1	6,774	973.3	787.1
1992	2,175,613	848.1	905.6	6,680	959.8	777.6
1991	2,169,518	857.6	922.3	6,636	953.4	768.9
1990	2,148,463	863.8	938.7	6,320	908.0	735.1
1989	2,150,466	871.3	950.5	6,534	916.3	760.5
1988	2,167,999	886.7	975.7	6,567	926.1	764.6

Note: *U.S. 2007 and 2006 data are provisional.

**U.S. data not available.

Crude death rates are per 100,000 population.

Age-adjusted rates are computed with the 2000 standard.

Source: National Center of Health Statistics

South Dakota Department of Health, Office of Data, Statistics, and Vital Records

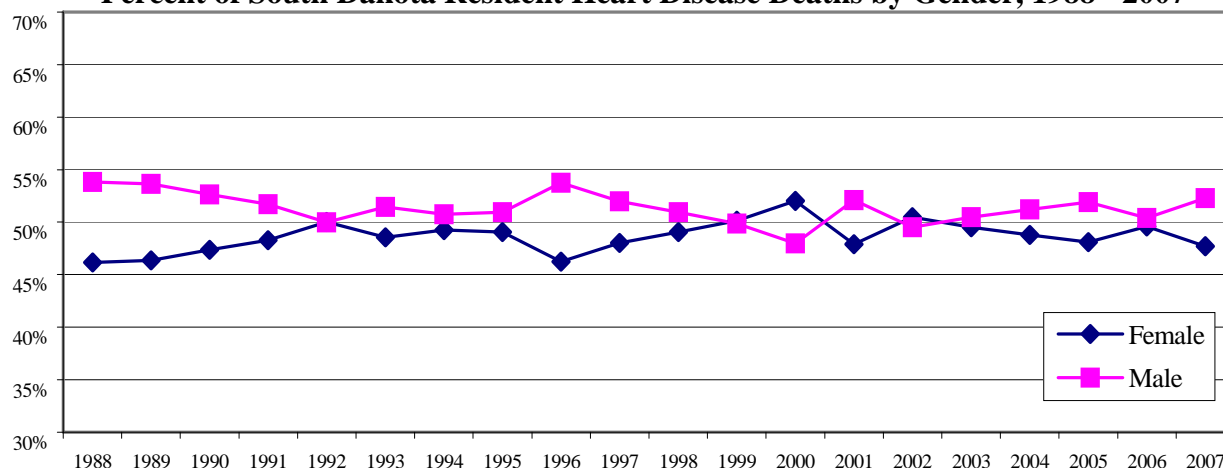
Leading Causes of Death

The five leading causes of death in 2007 for South Dakota residents were heart disease, cancer, chronic lower respiratory diseases, cerebrovascular diseases, and accidents.

Heart disease accounted for 23.9 percent of South Dakota's 2007 resident deaths, a decrease of 3.6 percent from 2006. Heart disease was the leading cause of death for South Dakota residents for women as well as American Indians. Figure 11, below, illustrates by gender the percent of South Dakota resident heart disease deaths for the last 20 years. Over the past 20 years, the percent of deaths due to heart disease

for males usually fell between 50 to 55 percent while for the females the percent of deaths due to heart disease usually fell between 45 to 50 percent. The majority of years showed males having a higher percent of deaths due to heart disease than females. However, this was not the case in 1999, 2000, and 2002 when females had a higher percent of death due to heart disease than males. In 2007, males showed an increase from 2006 in the percent of deaths due to heart disease while females showed a decrease from 2006 in the percent of deaths due to heart disease.

Figure 11
Percent of South Dakota Resident Heart Disease Deaths by Gender, 1988 - 2007



Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Cancer was the second leading cause of death and accounted for 23.6 percent of 2007 South Dakota resident deaths, an increase of 6.3 percent from 2006. Trachea, bronchus, and lung cancer were the leading cause of cancer deaths during the year, accounting for 26.5 percent of cancer deaths.

Chronic lower respiratory disease accounted for 6.7 percent of 2007 South Dakota resident deaths, an increase of 26.4 percent from 2006. Chronic lower respiratory diseases include emphysema, asthma, and bronchitis.

Cerebrovascular diseases accounted for 6.0 percent of 2007 South Dakota resident deaths, a decrease of 3.2 percent from 2006. Stroke, not specified as hemorrhage or infarction, caused the majority of the deaths for this type of disease.

Accidents caused 5.3 percent of all South Dakota resident deaths in 2007, a decrease of 15.9 percent from 2006. The two most common types of accidental deaths during the year were motor vehicle accidents, causing 40.6 percent, and falls, accounting for 36.4 percent of accidents.

Table 53, below, displays the breakdown of accidental deaths for the last five years. In 2007, there were 357 accidental deaths. There are two main types of accidental death, motor vehicle or other causes of accidental death.

The highest motor vehicle death in 2007 was car occupant with 68 deaths. The highest death in the other causes of accidental death in 2007 was falls with 130 deaths.

Table 53
South Dakota Resident Leading Causes of Death Due to Accidents, 2003-2007

	Total	Year of Death				
		2007	2006	2005	2004	2003
Total Deaths	1,993	357	443	396	407	390
Motor Vehicle Accidents	912	145	186	181	185	215
Car Occupant.....(V40-V49)	483	68	99	93	111	112
Occupant of Pick-Up Truck or Van.....(V50-V59)	175	26	39	33	33	44
Pedestrian.....(V01-V09)	76	17	12	20	13	14
Motorcycle Rider.....(V20-V29)	65	16	12	11	12	14
Occupant of Special All-Terrain Vehicle.....(V86)	33	7	4	5	6	11
Occupant of Heavy Transport Vehicle.....(V60-V69)	19	2	6	3	2	6
All Other Motor Vehicle Accidents	61	9	14	16	8	14
Other Causes of Accidental Death	1,081	212	257	215	222	175
Falls.....(W00-W19)	585	130	141	116	114	84
Accidental Poisoning(X40-X49)	114	20	29	21	31	13
Accidental Threats to Breathing (excl. drowning).....(W75-W84)	68	9	19	13	13	14
Exposure to Smoke, Fire, and Flames.....(X00-X09)	60	8	12	16	14	10
Accidental Drowning and Submersion.....(W65-W74, V90, V92)	48	7	12	10	8	11
Exposure to Excessive Natural Cold.....(X31)	30	6	6	9	5	4
Accidental Discharge of Firearms.....(W32-W34)	18	2	2	3	4	7
Air Transport Accidents...(V95.0-V95.3, V95.8-V95.9, & V96-V97)	11	3	1	2	3	2
Contact with Agricultural Machinery.....(W30)	9	1	3	1	1	3
All Other Causes of Accidents	138	26	32	24	29	27

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 54, on the next page, lists South Dakota resident leading causes of death for the last five years. Heart disease, and cancer have been the first and second cause of death for the past five years. In 2007, chronic lower respiratory diseases surpassed cerebrovascular disease for the number three spot; it was previously fourth or fifth in the past years. Cerebrovascular disease has been third or fifth for the past five years. Accidental death was the fifth cause of death in 2007. In the past it had been third, fifth, and fourth. Alzheimer's disease, diabetes mellitus, and influenza and pneumonia have

been sixth, seventh, or eighth for the past five years. For the past four years, unspecified dementia was not included in the leading causes of death. In the past it had ranked ninth. Likewise, nephritis, nephrotic syndrome, and nephrosis was not included in the leading cause of death. However, nephritis, nephrotic syndrome, and nephrosis had ranked tenth in 2003. The ninth leading cause of death for the past four years was intentional self-harm (suicide). The tenth leading cause of death for the past four years was chronic liver disease and cirrhosis.

Table 54
South Dakota Resident Leading Causes of
Death, 2003-2007

Cause of Death	Total			2007			2006			2005			2004			2003		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		34,832	100.0		6,800	100.0		7,038	100.0		7,074	100.0		6,811	100.0		7,109	100.0
Heart Disease(I00-I09, I11, I13, I20-I51)	1	8,847	25.4	1	1,623	23.9	1	1,743	24.8	1	1,764	24.9	1	1,775	26.1	1	1,942	27.3
Malignant Neoplasms (cancer).....(C00-C97)	2	7,981	22.9	2	1,606	23.6	2	1,561	22.2	2	1,610	22.8	2	1,559	22.9	2	1,645	23.1
Cerebrovascular Diseases(I60-I69)	3	2,294	6.6	4	408	6.0	4	437	6.2	3	511	7.2	3	463	6.8	3	475	6.7
Chronic Lower Respiratory Diseases.....(J40-J47)	4	2,045	5.9	3	458	6.7	5	375	5.3	4	440	6.2	5	393	5.8	5	379	5.3
Accidents(V01-X59, Y85-Y86)	5	1,993	5.7	5	357	5.3	3	443	6.3	5	396	5.6	4	407	6.0	4	390	5.5
Alzheimer's Disease(G30)	6	1,394	4.0	6	345	5.1	6	330	4.7	6	289	4.1	6	255	3.7	8	175	2.5
Diabetes Mellitus(E10-E14)	7	1,174	3.4	7	246	3.6	7	261	3.7	8	239	3.4	7	227	3.3	7	201	2.8
Influenza and Pneumonia(J10-J18)	8	1,007	2.9	8	189	2.8	8	173	2.5	7	242	3.4	8	180	2.6	6	223	3.1
Intentional Self-Harm (suicide)(*U03, X60-X84, Y87.0)	9	566	1.6	9	101	1.5	9	125	1.8	9	123	1.7	9	114	1.7	*	*	*
Chronic Liver Disease and Cirrhosis.....(K70 & K73-K74)	10	438	1.3	10	94	1.4	10	83	1.2	10	83	1.2	10	97	1.4	*	*	*
Unspecified Dementia(F03)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9	152	2.1
Nephritis, Nephrotic Syndrome, and Nephrosis(N00-N07, N17-N19, N25-N27)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10	131	1.8
Essential (primary) Hypertension and Hypertensive Renal Disease(I10 & I12)	*	*	*	*	*	*	*	*	*	10	83	1.2	*	*	*	*	*	*
All Other Causes		7,093	20.4		1,373	20.2		1,507	21.4		1,294	18.3		1,341	19.7		1,396	19.6

Note: Letter/number combinations following cause of death are ICD-10 codes.

Due to rounding disease-specific death rates may not sum to state death rate.

*This cause was not one of the ten leading causes of death for that year.

The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Race

Table 55, below, presents South Dakota resident leading causes of death by race. In 2007, patterns for the 10 leading causes of death varied by race. Eight of the 10 leading causes were the same for whites and American Indians, but they differed by rank. For example, accidents were the sixth leading cause of death at 4.5 percent for the white population, but the second leading cause of death for the American Indian population at 14.1 percent. Alzheimer's disease and

unspecified dementia were in the 10 leading causes of death for the white population, but not the American Indian population. Among the 10 leading causes of death for the American Indian population, but not for the white population were chronic liver disease and cirrhosis, nephritis, nephritic syndrome, and nephrosis, septicemia, and congenital malformations, deformations, and chromosomal abnormalities.

Table 55
South Dakota Resident Leading Causes of Death by Race, 2007

Cause of Death	All Races			White			American Indian		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		6,800	100.0		6,239	100.0		512	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,623	23.9	2	1,532	24.6	1	81	15.8
Malignant Neoplasms (cancer)....(C00-C97)	2	1,606	23.6	1	1,534	24.6	3	63	12.3
Chronic Lower Respiratory Diseases(J40-J47)	3	458	6.7	3	434	7.0	6	21	4.1
Cerebrovascular Diseases.....(I60-I69)	4	408	6.0	4	389	6.2	8	16	3.1
Accidents..... (V01-X59, Y85-Y86)	5	357	5.3	6	283	4.5	2	72	14.1
Alzheimer's Disease.....(G30)	6	345	5.1	5	339	5.4	*	*	*
Diabetes Mellitus.....(E10-E14)	7	246	3.6	7	202	3.2	4	44	8.6
Influenza and Pneumonia.....(J10-J18)	8	189	2.8	8	175	2.8	9	14	2.7
Intentional Self-Harm (suicide)(*U03, X60-X84, Y87.0)	9	101	1.5	9	78	1.3	7	20	3.9
Chronic Liver Disease and Cirrhosis(K70 & K73-K74)	10	94	1.4	*	*	*	5	38	7.4
Nephritis, Neprotic Syndrome, and Nephrosis...(N00-N07, N17-N19, N25-N27)	*	*	*	*	*	*	10	9	1.8
Unspecified Dementia.....(F03)	*	*	*	10	70	1.1	*	*	*
Congenital Malformations, Deformations, and Chromosomal Abnormalities.(Q00-Q99)	*	*	*	*	*	*	10	9	1.8
Septicemia.....(A40-A41)	*	*	*	*	*	*	10	9	1.8
All Other Causes	-	1,373	20.2	-	1,203	19.3	-	116	22.7

Note: Letter / number combinations following cause of death are ICD-10 codes.

Due to rounding, disease-specific death rates may not sum to state death rate.

* This cause was not one of the ten leading causes of death for this race group.

The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Gender

In 2007, patterns for the 10 leading causes of death also varied by gender in South Dakota (Table 62, on the next page). Eight of the 10 leading causes were the same for South Dakota's men

and women, but they differed in rank. Intentional self-harm (suicide) and chronic liver disease and cirrhosis were among the 10 leading causes of death for South Dakota's men, but not for women.

Likewise, unspecified dementia, and essential (primary) hypertension and hypertensive renal disease were among the 10 leading causes of death for South Dakota's women, but not for South Dakota's men. Men were also more likely to die in accidents than women were, while women were more likely to

die from Alzheimer's disease than men. When ranked together, intentional self-harm (suicide) and chronic liver disease and cirrhosis were in the top 10 but when broken out by gender they were not included in women's top 10 leading causes of death.

Table 56
South Dakota Resident Leading Causes of Death
by Gender, 2007

Cause of Death	Total			Male			Female		
	Rank	Deaths	Percent	Rank	Deaths	Percent	Rank	Deaths	Percent
South Dakota (All Deaths)		6,800	100.0		3,428	100.0		3,372	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1	1,623	23.9	2	849	24.8	1	774	23.0
Malignant Neoplasms (cancer)....(C00-C97)	2	1,606	23.6	1	856	25.0	2	750	22.2
Chronic Lower Respiratory Diseases(J40-J47)	3	458	6.7	3	262	7.6	5	196	5.8
Cerebrovascular Diseases.....(I60-I69)	4	408	6.0	5	159	4.6	4	249	7.4
Accidents..... (V01-X59, Y85-Y86)	5	357	5.3	4	227	6.6	6	130	3.9
Alzheimer's Disease.....(G30)	6	345	5.1	7	95	2.8	3	250	7.4
Diabetes Mellitus.....(E10-E14)	7	246	3.6	6	125	3.6	7	121	3.6
Influenza and Pneumonia.....(J10-J18)	8	189	2.8	8	77	2.2	8	112	3.3
Intentional Self-Harm (suicide)(*U03, X60-X84, Y87.0)	9	101	1.5	9	75	2.2	*	*	*
Chronic Liver Disease and Cirrhosis(K70 & K73-K74)	10	94	1.4	10	53	1.5	*	*	*
Unspecified Dementia.....(F03)	*	*	*	*	*	*	10	43	1.3
Essential (primary) hypertension and hypertensive renal disease.....(I10 & I12)	*	*	*	*	*	*	9	44	1.3
All Other Causes	-	1,373	20.2	-	650	19.0	-	703	20.8

Note: Letter / number combinations following cause of death are ICD-10 codes.

Due to rounding, disease-specific death rates may not sum to state death rate.

* This cause was not one of the ten leading causes of death for this gender.

The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Age

Table 57, on the next page, lists the five leading causes of death by age group. Excluding infants, accidents were the leading cause of death to age 44. The

leading cause of death for the 45 to 54, and 55 to 64 age group was cancer. Heart disease was the leading cause of death for the 65 and over age group.

Table 57
South Dakota Resident Five Leading Causes of Death by Age Group, 2007

Rank	All Ages	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 & Over
1	Heart Disease 1,623	Certain Conditions in Perinatal Period 33	Heart Disease 2	Accidents 10	Accidents 41	Accidents 33	Accidents 35	Malignant Neoplasms (cancer) 110	Malignant Neoplasms (cancer) 268	Heart Disease 1,391
2	Malignant Neoplasms (cancer) 1,606	Congenital Malformations 24	Malignant Neoplasms (cancer) 2	Malignant Neoplasms (cancer) 3	Intentional Self-Harm (suicide) 24	Intentional Self-Harm (suicide) 20	Malignant Neoplasms (cancer) 26	Heart Disease 69	Heart Disease 126	Malignant Neoplasms (cancer) 1,184
3	Chronic Lower Respiratory Disease 458	Sudden Infant Death Syndrome 8	Accidents 2	Intentional Self-Harm (suicide) 3	Malignant Neoplasms (cancer) 5	Heart Disease 10	Heart Disease 24	Accidents 53	Chronic Lower Respiratory Diseases 34	Chronic Lower Respiratory Diseases 414
4	Cerebrovascular Diseases 408	Accidents 4	Congenital Malformations 2	Cerebral Palsy and Other Paralytic Syndromes 2	Assault (homicide) 4	Malignant Neoplasms (cancer) 8	Chronic Liver Disease and Cirrhosis 13	Chronic Liver Disease and Cirrhosis 27	Accidents 33	Cerebrovascular Diseases 367
5	Accidents 357	Assault (homicide) 2	Other Ill-defined and Unknown Causes of Mortality 2	**	***	****	Intentional Self-Harm (suicide) 7	Intentional Self-Harm (suicide) 19	Diabetes Mellitus 32	Alzheimer's Disease 341

Note: **The following causes tied for fifth place with 1 death; influenza and pneumonia, congenital malformations, episodic and paroxysmal disorders, other extrapyramidal and movement disorders, and disorders of psychological development.
 ***The following causes tied for fifth place with 2 deaths; chronic lower respiratory diseases, cerebrovascular diseases, diseases of myoneural junction and muscle, and pregnancy, childbirth, and the puerperium.
 ****The following causes tied for fifth place with 3 deaths; chronic liver disease and cirrhosis, other symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified.

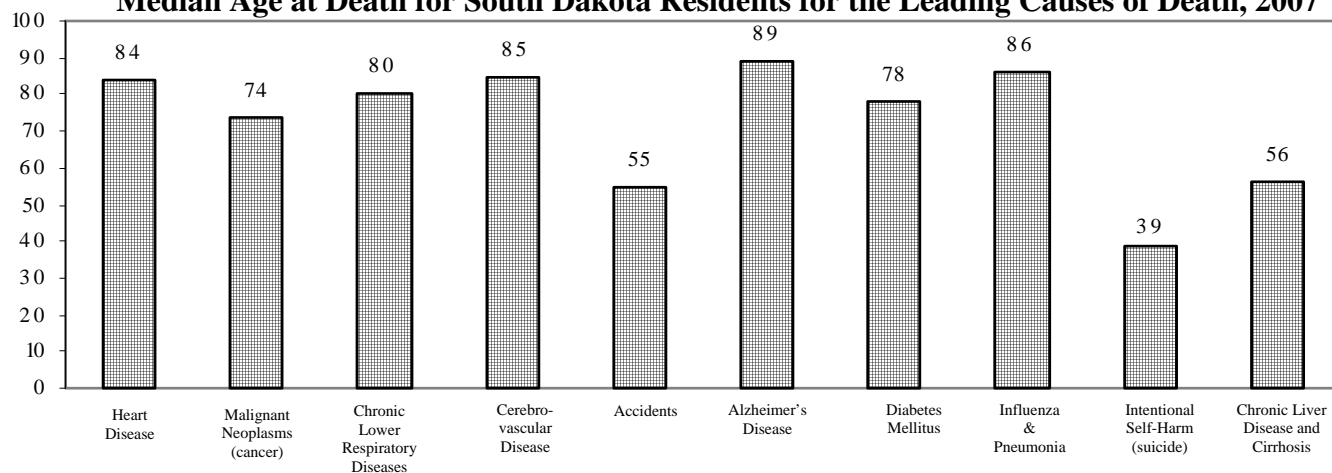
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Median Age

Figure 12, below, presents data on the median age at death for the 10 leading

causes of death for South Dakota residents in 2007.

Figure 12
Median Age at Death for South Dakota Residents for the Leading Causes of Death, 2007



Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 58, below, shows the median age at death for South Dakota residents from the leading causes of death by race and gender. In 2007, the median age at death was 80 for all South Dakotans; for white residents the median age was 81, compared to 59 for American Indians. The overall median age at death stayed the same for whites and increased by two

for American Indians when compared to their overall median age at death in 2006. The median age at death in 2007 for South Dakota resident males and females was 77 and 83, respectively. There was a decrease of one for females while males remained unchanged when compared to 2006.

Table 58
Median Age at Death for South Dakota Residents for the Leading Causes of Death
by Race and Gender, 2007

Cause of Death	Median Age at Death in Years				
	All	Race		Gender	
	Total Deaths	White	American Indian	Male	Female
South Dakota (All Deaths)	80	81	59	77	83
Heart Disease (I00-I09, I11, I13, I20-I51)	84	84	67	80	87
Malignant Neoplasms (cancer) (C00-C97)	74	75	67	74	74
Chronic Lower Respiratory Diseases (J40-J47)	80	80	71	80	79
Cerebrovascular Diseases (I60-I69)	85	86	74	83	87
Accidents (V01-X59, Y85-Y86)	55	62	38	51	65
Alzheimer's Disease (G30)	89	89	*	86	90
Diabetes Mellitus (E10-E14)	78	80	66	75	82
Influenza and Pneumonia (J10-J18)	86	87	73	84	88
Intentional Self-Harm (suicide) (*U03, X60-X84, Y87.0)	39	48	21	39	*
Chronic Liver Disease and Cirrhosis (K70 & K73-K74)	56	*	51	57	*
Essential (primary) Hypertension and Hypertensive Renal Disease (I10 & I12)	*	*	*	*	88
Unspecified Dementia (F03)	*	90	*	*	91
Nephritis, Nephrotic Syndrome, and Nephrosis (N00-N07, N17-N19, N25-N27)	*	*	63	*	*
Septicemia (A40-A41)	*	*	64	*	*
Congenital Malformations, Deformations, and Chromosomal Abnormalities (Q00-Q99)	*	*	0	*	*
All Other Causes	81	81	58	79	81

Note: Letter / number combinations following cause of death are ICD-10 codes.

*This cause was not one of the ten leading causes of death for this race or gender.

The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.

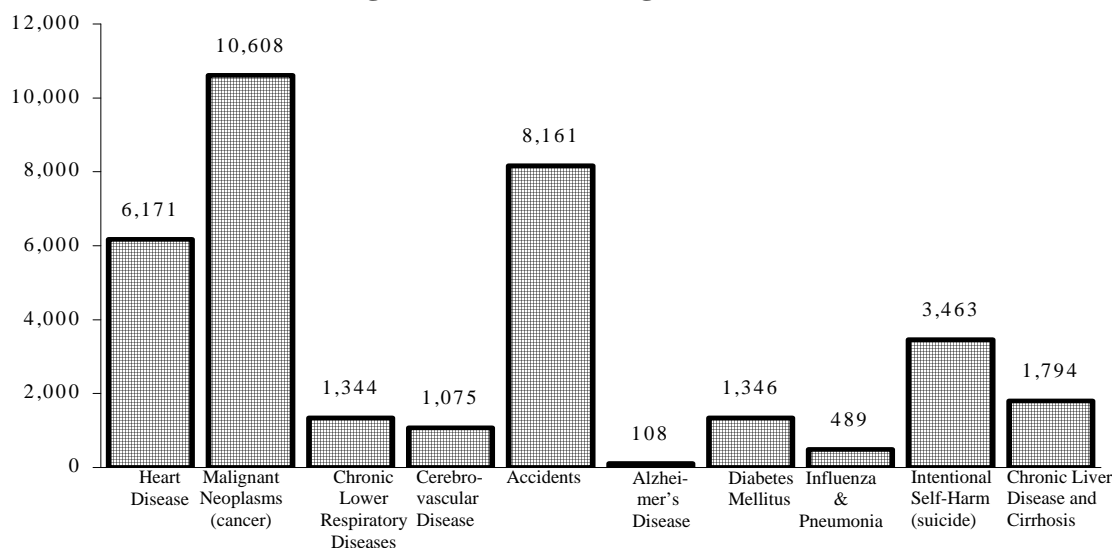
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Years of Potential Life Lost

Figure 13, on the next page, depicts the years of potential life lost (YPLL) before age 75 for each of these causes. Please refer to page 232 of the technical notes section for an explanation of how

YPLL before age 75 is calculated. Cancer led in YPLL (10,608 years) because many of the decedents were at a relatively young age at the time of death.

Figure 13
South Dakota Resident Years of Potential Life Lost (YPLL)
Before Age 75 for the Leading Causes of Death, 2007



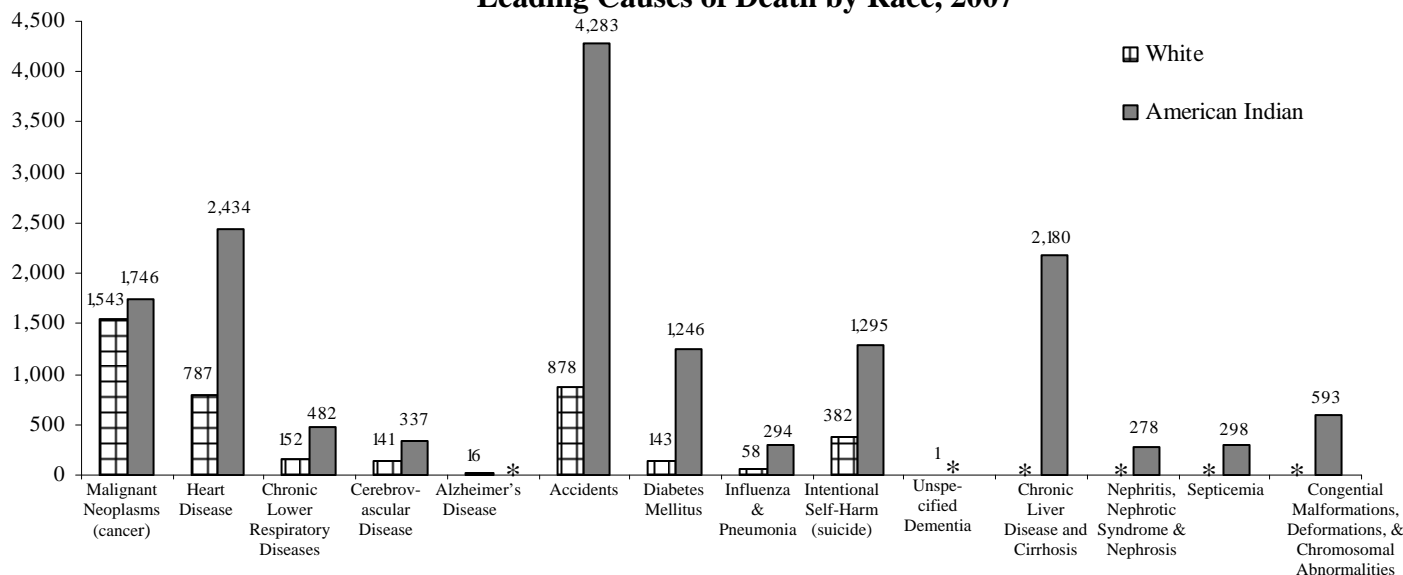
Note: The data above is not comparable to the age-adjusted data in Figure 14 below.
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Figure 14, below, illustrates the years of potential life lost (YPLL) before the age 75 per 100,000 population for the top 10 causes of death by race. When comparing YPLL by race, American Indians exceed whites substantially in YPLL for the leading causes of death.

American Indians' largest YPLL was accidents with 4,283 years while whites' largest YPLL was cancer with 1,543 years. Whites' second largest

YPLL was accidents with 878 years while American Indians' second largest YPLL was heart disease with 2,434 years. Whites' third largest YPLL was heart disease with 787 years. Chronic liver disease and cirrhosis was the third largest YPLL for American Indians with 2,180 years, which still exceeded whites' largest YPLL (cancer with 1,543 years).

Figure 14
Age-Adjusted Years of Potential Life Lost (YPLL) Before Age 75 for the
Leading Causes of Death by Race, 2007



Note: Years of potential life lost are age-adjusted per 100,000 population.
*This cause was not one of the ten leading causes of death for this race group.
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Place of Death

Table 59, below, displays the 10 leading causes of death by place where death occurred in 2007. Overall, nursing home, long term

care, and hospice facility had the highest occurrence of deaths with 38.8 percent. Hospital followed closely with 37.9 percent.

Table 59
South Dakota Resident Deaths by Cause of Death and Place of Death, 2007

Cause of Death	Total		Hospital		Nursing Home/Long Term Care/Hospice Facility		Residence		All Other Reported Entries	
	Num	%	Num	%	Num	%	Num	%	Num	%
South Dakota (All Deaths)	6,800	100.0	2,576	37.9	2,639	38.8	1,237	18.2	342	5.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	1,623	100.0	562	34.6	605	37.3	399	24.6	53	3.3
Malignant Neoplasms (cancer).....(C00-C97)	1,606	100.0	576	35.9	560	34.9	419	26.1	50	3.1
Chronic Lower Respiratory Diseases.....(J40-J47)	458	100.0	207	45.2	177	38.6	71	15.5	3	0.7
Cerebrovascular Diseases.....(I60-I69)	408	100.0	171	41.9	192	47.1	34	8.3	11	2.7
Accidents.....(V01-X59, Y85-Y86)	357	100.0	159	44.5	38	10.6	38	10.6	122	34.2
Alzheimer's Disease.....(G30)	345	100.0	20	5.8	306	88.7	14	4.1	5	1.4
Diabetes Mellitus.....(E10-E14)	246	100.0	88	35.8	107	43.5	46	18.7	5	2.0
Influenza and Pneumonia(J10-J18)	189	100.0	91	48.1	89	47.1	7	3.7	2	1.1
Intentional Self-Harm (suicide)(*U03, X60-X84, Y87.0)	101	100.0	11	10.9	1	1.0	59	58.4	30	29.7
Chronic Liver Disease and Cirrhosis(K70 & K73-K74)	94	100.0	56	59.6	18	19.1	14	14.9	6	6.4
All Other Causes	1,373	100.0	635	46.2	546	39.8	136	9.9	55	4.0

Note: The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.
Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records.

Tobacco Use

On the death certificate, the certifier was instructed to check “yes” or “probably” if in their opinion, the use of tobacco contributed to death or check “no” if in their clinical judgment tobacco use did not contribute to the death. There was also the option of “unknown” if the certifier was unsure if tobacco use contributed to death. On 1,199 deaths

or 17.6 percent, the certifier indicated “yes” or “probably” that tobacco use contributed to the death. Conversely, on 3,788 deaths, or 55.7 percent, the certifier indicated that tobacco use did not contribute to the death.

In the remaining 1,813 deaths, or 26.7 percent, the certifier was unsure if tobacco use contributed to the death.

Table 60, below, displays the 10 leading causes of death where the certifier said “yes” or “probably” that tobacco use contributed to the death. Tobacco use contributed to death in 74.8 percent, or 318 out of the 425 trachea, bronchus, and lung deaths in

2007. In 70.3 percent, or 322 chronic lower respiratory disease deaths the certifier said “yes” or “probably” that tobacco use contributed to the death. Of the 13 larynx deaths in 2007, certifiers said tobacco use contributed to 9 deaths, or 69.2 percent.

Table 60
South Dakota Resident Leading Causes of Death as They Relate to Tobacco Use, 2007
(Did Tobacco Use Contribute to Death)

Cause of Death	Yes/Probably		Total Deaths	
	Number	Percent	Number	Percent
Total	1,199	17.6	6,800	100.0
Malignant Neoplasms (cancer).....(C00-C97)	430	26.8	1,606	100.0
Trachea, Bronchus, and Lung.....(C33-C34)	318	74.8	425	100.0
Esophagus.....(C15)	16	37.2	43	100.0
Pancreas.....(C25)	10	10.8	93	100.0
Lip, Oral Cavity, and Pharynx.....(C00-C14)	10	62.5	16	100.0
Bladder.....(C67)	9	27.3	33	100.0
Larynx.....(C32)	9	69.2	13	100.0
Chronic Lower Respiratory Diseases.....(J40-J47)	322	70.3	458	100.0
Emphysema.....(J43)	33	68.8	48	100.0
Heart Disease.....(I00-I09, I11, I13, I20-I51)	221	13.6	1,623	100.0
Atherosclerotic Heart Disease.....(I25.1)	78	15.3	511	100.0
Acute Myocardial Infarction.....(I21-I22)	71	12.9	550	100.0
Atherosclerotic Cardiovascular Disease.....(I25.0)	14	16.9	83	100.0
Cerebrovascular Diseases.....(I60-I69)	43	10.5	408	100.0
Diabetes Mellitus.....(E10-E14)	30	12.2	246	100.0
Influenza and Pneumonia.....(J10-J18)	15	7.9	189	100.0
Pneumonia.....(J12-J18)	15	8.2	183	100.0
Aortic Aneurysm and Dissection.....(I71)	13	28.3	46	100.0
Chronic Liver Disease and Cirrhosis....(K70 & K73-K74)	9	9.6	94	100.0
Essential (primary) Hypertension and Hypertensive Renal Disease.....(I10 & I12)	7	10.0	70	100.0
Pneumonitis Due to Solids and Liquids.....(J69)	7	13.0	54	100.0
Peripheral Vascular Disease, Unspecified.....(I73.9)	7	25.0	28	100.0
Disorders of Lipoprotein Metabolism and Other Lipidemias..... (E78)	7	35.0	20	100.0
All Other Causes	88	4.5	1,958	100.0

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Method of Disposition

Table 61, on the next page, displays the different methods of disposition for the last 10 years. The top disposition in 2007 was burial with 4,775 deaths. The second highest method of disposition in 2007 was cremation with 1,474 deaths.

Since 1998, burial has been the highest method of disposition chosen and cremation has been the second highest method of disposition chosen.

Table 61
South Dakota Resident Deaths by Disposition, 1998-2007

Year	Type of Disposition						
	Total Deaths	Burial	Cremation	Removal from State	Donation	Entombment	Other
2007	6,800	4,775	1,474	481	46	18	0
2006	7,038	5,127	1,440	431	30	6	0
2005	7,074	5,373	1,515	151	27	7	0
2004	6,811	5,305	1,348	120	22	12	0
2003	7,109	5,675	1,321	76	26	**	8
2002	6,886	5,627	1,148	72	24	**	11
2001	6,915	5,700	1,102	79	20	**	10
2000	7,014	5,859	1,038	86	20	**	8
1999	6,941	5,825	938	141	21	**	11
1998	6,850	5,808	829	175	25	**	5

Note: Failure of deaths to add to total is due to not stated disposition.

** Prior to 2004 entombment was included in the other category.

Sharp increase in removal from state from 2005 to 2006 due to clarification of reporting process.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Education

The education of the deceased was collected on the death certificate for the first time in 2004. Table 62, below, displays the level of education by age group for residents ages 25 and above while Table 63, on the next page, displays level of education by leading causes of death for residents ages 25 and above. Table 62 has been included because the large differences in age distributions among the education groups could

have an effect on the leading causes of death shown in Table 63. For example, when looking at the 8th grade or less education level the leading cause of death is heart disease with 25.9 percent. However, when comparing some college, but no degree the leading cause of death is cancer with 26.8 percent. Part of the reason for the variation could be because of the differences of age distribution between education groups in Table 62.

Table 62
South Dakota Resident Deaths by Age and Education for Ages 25 and Above, 2007

Age	Total		8 th Grade or Less		Some High School		High School Graduate or GED		Some College, but No Degree		College Degree/Votech/Teacher's Certificate	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	6,589	100.0	1,386	100.0	650	100.0	2,562	100.0	727	100.0	1,242	100.0
25-34	96	1.5	5	0.4	11	1.7	41	1.6	18	2.5	20	1.6
35-44	146	2.2	9	0.6	11	1.7	65	2.5	33	4.5	28	2.3
45-54	405	6.1	25	1.8	40	6.2	184	7.2	60	8.3	94	7.6
55-64	667	10.1	51	3.7	63	9.7	259	10.1	126	17.3	164	13.2
65-74	1,008	15.3	145	10.5	98	15.1	452	17.6	121	16.6	190	15.3
75-84	1,762	26.7	366	26.4	193	29.7	751	29.3	172	23.7	272	21.9
85+	2,505	38.0	785	56.6	234	36.0	810	31.6	197	27.1	474	38.2

Note: Failure of deaths to add to total is due to not stated education.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Table 63
South Dakota Resident Leading Causes of Death for Ages 25 and Above by Education, 2007

Cause of Death	Total		8 th Grade or Less		Some High School		High School Graduate or GED		Some College, but No Degree		College Degree/Votech/Teacher's Certificate	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	6,589	100.0	1,386	100.0	650	100.0	2,562	100.0	727	100.0	1,242	100.0
Heart Disease (I00-I09, I11, I13, I20-I51)	1,620	24.6	359	25.9	167	25.7	644	25.1	167	23.0	277	22.3
Malignant Neoplasms (cancer)(C00-C97)	1,596	24.2	273	19.7	141	21.7	644	25.1	195	26.8	339	27.3
Chronic Lower Respiratory Diseases.....(J40-J47)	455	6.9	104	7.5	60	9.2	175	6.8	52	7.2	62	5.0
Cerebrovascular Diseases(I60-I69)	406	6.2	111	8.0	33	5.1	138	5.4	43	5.9	79	6.4
Alzheimer's Disease.....(G30)	345	5.2	100	7.2	34	5.2	96	3.7	37	5.1	77	6.2
Accidents.....(V01-X59, Y85-Y86)	300	4.6	30	2.2	33	5.1	128	5.0	46	6.3	63	5.1
Diabetes Mellitus.....(E10-E14)	245	3.7	51	3.7	20	3.1	110	4.3	28	3.9	36	2.9
Influenza & Pneumonia.....(J10-J18)	188	2.9	60	4.3	14	2.2	60	2.3	11	1.5	43	3.5
Chronic Liver Disease and Cirrhosis.....(K70 & K73-K74)	94	1.4	7	0.5	10	1.5	51	2.0	10	1.4	14	1.1
Intentional Self-Harm (suicide)(*U03, X60-X84, Y87.0)	74	1.1	0	0.0	7	1.1	35	1.4	12	1.7	19	1.5
Nephritis, Nephrotic Syndrome, and Nephrosis(N00-N07, N17-N19, N25-N27)	74	1.1	14	1.0	10	1.5	33	1.3	8	1.1	9	0.7
All Other Causes	1,192	18.1	277	20.0	121	18.6	448	17.5	118	16.2	224	18.0

Note: Failure of deaths to add to total is due to not stated education.

The asterisks (*) preceding the cause-of-death codes indicate that they are not part of the International Classification of Diseases, Tenth Revision.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records

Leading Causes and Selected Components

Table 64, pages 70 to 72, displays South Dakota resident deaths, the crude death rate, and the age-adjusted death rate for 15 leading causes and selected components from 2003 to 2007.

The crude and age adjusted rate for all causes in 2007 were 900.8 and 780.9 respectively, which are down from the crude and age-adjusted rates in 2006 of 932.4 and 807.5, respectively.

Table 64
South Dakota Resident Deaths, Crude, and Age-Adjusted Death Rates for 15 Leading Causes and Selected Components, 2003-2007

Cause of Death	Number						Crude Death Rates						Age-Adjusted Death Rates					
	Total	2007	2006	2005	2004	2003	Total	2007	2006	2005	2004	2003	Total	2007	2006	2005	2004	2003
All Causes	34,832	6,800	7,038	7,074	6,811	7,109	922.9	900.8	932.4	937.1	902.3	941.8	801.5	780.9	807.5	816.2	783.6	819.2
Heart Disease	8,847	1,623	1,743	1,764	1,775	1,942	234.4	215.0	230.9	233.7	235.1	257.3	197.3	180.3	194.6	196.9	197.3	217.3
Acute Myocardial Infarction	3,124	550	636	610	631	697	82.8	72.9	84.3	80.8	83.6	92.3	71.6	62.9	73.1	70.2	71.6	80.3
Atherosclerotic Heart Disease**	2,752	511	567	591	545	538	72.9	67.7	75.1	78.3	72.2	71.3	60.9	56.4	63.1	65.3	60.3	59.4
Heart Failure	509	63	62	54	145	185	13.5	8.3	8.2	7.2	19.2	24.5	10.7	6.8	6.5	5.5	15.2	19.5
Atherosclerotic Cardiovascular Disease	503	83	92	117	92	119	13.3	11.0	12.2	15.5	12.2	15.8	10.6	8.9	9.7	12.5	9.6	12.5
All Other Forms of Chronic Ischemic Heart Disease	363	80	83	75	69	56	9.6	10.6	11.0	9.9	9.1	7.4	7.9	8.4	8.9	8.1	7.6	6.2
Hypertensive Heart Disease	211	48	52	53	35	23	5.6	6.4	6.9	7.0	4.6	3.0	4.3	4.8	5.3	5.4	3.7	2.4
Acute Rheumatic Fever & Chronic Rheumatic Heart Diseases	72	17	18	8	16	13	1.9	2.3	2.4	1.1	2.1	1.7	1.7	1.9	2.1	0.8	1.9	1.5
Hypertensive Heart and Renal Disease	33	10	9	9	1	4	0.9	1.3	1.2	1.2	0.1	0.5	0.7	1.1	0.9	0.9	0.1	0.4
Acute and Subacute Endocarditis	14	3	2	4	2	3	0.4	0.4	0.3	0.5	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3
Diseases of Pericardium and Acute Myocarditis	11	2	2	2	2	3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.4
All Other Forms of Heart Disease	1,255	256	220	241	237	301	33.3	33.9	29.1	31.9	31.4	39.9	28.3	28.6	24.5	27.5	26.8	34.3
Malignant Neoplasms (cancer)	7,981	1,606	1,561	1,610	1,559	1,645	211.5	212.8	206.8	213.3	206.5	217.9	191.3	192.2	186.1	194.9	186.4	197.1
Trachea, Bronchus, and Lung	2,156	425	435	467	423	406	57.1	56.3	57.6	61.9	56.0	53.8	52.6	51.9	52.9	57.2	51.7	49.0
Colon, Rectum, and Anus	818	165	150	176	151	176	21.7	21.9	19.9	23.3	20.0	23.3	19.2	19.4	17.5	20.8	17.4	20.7
Female Breast	550	113	95	117	105	120	28.9	29.7	25.0	30.8	27.6	31.6	24.2	23.3	21.3	25.8	23.4	27.2
Prostate	499	94	103	94	102	106	26.6	25.1	27.5	25.1	27.2	28.3	29.3	28.0	30.0	27.2	29.7	31.4
Pancreas	469	93	89	90	102	95	12.4	12.3	11.8	11.9	13.5	12.6	11.2	11.2	10.5	11.1	12.2	11.2
Leukemia	356	76	66	63	71	80	9.4	10.1	8.7	8.3	9.4	10.6	8.3	8.9	7.7	7.4	8.2	9.6
Non-Hogkin's Lymphoma	323	69	63	56	67	68	8.6	9.1	8.3	7.4	8.9	9.0	7.5	8.1	7.4	6.6	7.9	7.8
Meninges, Brain, and Other Parts of Central Nervous System	217	44	36	34	50	53	5.7	5.8	4.8	4.5	6.6	7.0	5.5	5.6	4.5	4.3	6.3	6.8
Kidney and Renal Pelvis	216	43	46	43	45	39	5.7	5.7	6.1	5.7	6.0	5.2	5.2	5.2	5.7	5.3	5.3	4.8
Ovary	214	43	49	42	34	46	11.3	11.3	12.9	11.0	8.9	12.1	9.4	9.6	10.4	9.3	7.5	10.0
Esophagus	207	43	44	39	40	41	5.5	5.7	5.8	3.7	6.0	5.7	5.1	5.4	5.3	4.9	4.9	5.1

Table 64 (Continued)
South Dakota Resident Deaths, Crude, and Age-Adjusted Death Rates for 15 Leading Causes and Selected Components, 2003-2007

Cause of Death	Number						Crude Death Rates						Age-Adjusted Death Rates					
	Total	2007	2006	2005	2004	2003	Total	2007	2006	2005	2004	2003	Total	2007	2006	2005	2004	2003
Bladder	194	33	40	46	35	40	5.1	4.4	5.3	6.1	4.6	5.3	4.4	3.8	4.5	5.2	4.1	4.6
Multiple Myeloma and Immunoproliferative	176	24	36	28	45	43	4.7	3.2	4.8	3.7	6.0	5.7	4.2	2.8	4.3	3.2	5.2	5.2
Liver and Intrahepatic Bile Ducts	175	36	32	43	35	29	4.6	4.8	4.2	5.7	4.6	3.8	4.3	4.5	3.9	5.3	4.2	3.6
Stomach	146	35	37	35	17	22	3.9	4.6	4.9	4.6	2.3	2.9	3.5	4.1	4.4	4.3	2.0	2.7
Melanoma of Skin	122	34	23	16	16	33	3.2	4.5	3.0	2.1	2.1	4.4	3.1	4.3	2.9	2.2	1.9	4.1
Corpus Uteri and Uterus, Part Unspecified	103	25	19	18	19	22	5.4	6.6	5.0	4.7	5.0	5.8	4.4	5.2	4.0	3.9	4.2	4.5
Lip, Oral Cavity, and Pharynx	89	16	20	21	12	20	2.4	2.1	2.6	2.8	1.6	2.6	2.2	2.0	2.3	2.7	1.4	2.5
Larynx	37	13	3	4	5	12	1.0	1.7	0.4	0.5	0.7	1.6	0.9	1.6	0.4	0.5	0.7	1.5
Cervix Uteri	33	9	1	7	7	9	1.7	2.4	0.3	1.8	1.8	2.4	1.7	2.2	0.3	1.9	1.9	2.2
Hodgkin's Disease	20	3	2	3	4	8	0.5	0.4	0.3	0.4	0.5	1.1	0.5	0.4	0.3	0.4	0.5	1.1
Ill-Defined, Secondary, and Unspecified Sites	399	76	86	74	87	76	10.6	10.1	11.4	9.8	11.5	10.1	9.5	8.8	10.2	8.8	10.5	8.9
All Other Cancers	462	94	86	94	87	101	12.2	12.5	11.4	12.5	11.5	13.4	11.0	11.1	9.9	11.4	10.3	12.3
Cerebrovascular Diseases	2,294	408	437	511	463	475	60.8	54.1	57.9	67.7	61.3	62.9	49.8	44.2	47.0	56.0	50.1	51.9
Chronic Lower Respiratory Diseases	2,045	458	375	440	393	379	54.2	60.7	49.7	58.3	52.1	50.2	46.7	52.0	42.8	50.4	44.6	43.8
Accidents	1,993	357	443	396	407	390	52.8	47.3	58.7	52.5	53.8	51.7	50.1	44.5	55.4	49.5	51.3	49.8
Motor Vehicle Accidents	912	145	186	181	185	215	24.2	19.2	24.6	24.0	24.5	28.5	24.1	18.9	24.6	23.4	24.4	28.5
All Other Accidents	1081	212	257	215	222	175	28.6	28.1	34.0	28.5	29.4	23.2	26.0	25.6	30.8	25.7	26.9	21.3
Alzheimer's Disease	1,394	345	330	289	255	175	36.9	45.7	43.7	38.3	33.8	23.2	28.7	35.3	33.7	29.9	26.2	18.1
Diabetes Mellitus	1,174	246	261	239	227	201	31.1	32.6	34.6	31.7	30.1	26.6	27.2	28.7	29.8	27.7	26.2	23.6
Influenza and Pneumonia	1,007	189	173	242	180	223	26.7	25.0	22.9	32.1	23.8	29.5	21.5	20.3	18.3	25.8	19.2	23.7
Intentional Self-Harm (suicide)	566	101	125	123	114	103	15.0	13.4	16.6	16.3	15.1	13.6	15.1	13.5	16.7	16.2	15.3	13.8
Chronic Liver Disease and Cirrhosis	438	94	83	83	97	81	11.6	12.5	11.0	11.0	12.9	10.7	11.7	12.7	11.1	11.0	12.8	10.8
Nephritis, Nephrotic Syndrome, and Nephrosis	412	74	60	54	93	131	10.9	9.8	7.9	7.2	12.3	17.4	9.2	8.2	6.8	6.0	10.4	14.3

Table 64 (Continued)
South Dakota Resident Deaths, Crude, and Age-Adjusted Death Rates for 15 Leading Causes and Selected Components, 2003-2007

Cause of Death	Number						Crude Death Rates						Age-Adjusted Death Rates					
	Total	2007	2006	2005	2004	2003	Total	2007	2006	2005	2004	2003	Total	2007	2006	2005	2004	2003
Unspecified Dementia	411	70	74	30	85	152	10.9	9.3	9.8	4.0	11.3	20.1	8.3	7.1	7.5	3.0	8.6	15.4
Essential (primary) Hypertension and Hypertensive Renal Disease	326	70	79	83	55	*	8.6	9.3	10.5	11.0	7.3	*	6.9	7.5	8.2	8.7	5.9	*
Parkinson's Disease	318	62	75	60	65	56	8.4	8.2	9.9	7.9	8.6	7.4	6.9	6.7	8.1	6.6	7.0	6.2
Septicemia	292	64	65	*	*	69	7.7	8.5	8.6	*	*	9.1	6.8	7.4	7.7	*	*	7.9
Aortic Aneurysm and Dissection	*	*	*	*	57	54	*	*	*	*	7.6	7.2	*	*	*	*	6.5	6.1
Neoplasms of Uncertain or Unknown Behavior	*	*	*	59	*	*	*	*	*	7.8	*	*	*	*	*	6.6	*	*
Metabolic Disorders	*	*	*	58	*	*	*	*	*	7.7	*	*	*	*	*	6.3	*	*

Note: *This cause was not one of the fifteen leading causes or death for that year.

**Atherosclerotic Heart Disease is now broke out from Other Acute Ischemic Heart Disease.

Source: South Dakota Department of Health, Office of Data, Statistics, and Vital Records.